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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/613,989 | 07/08/2003 | Hidetaka Yamasaki | 402698 | 6249 |

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EXAMINER

LARSON, LOWELL A

ART UNIT PAPER NUMBER

3725

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TW

Office Action Summary

Application No.

10/613,989

Applicant(s)

YAMASAKI ET AL.

Examiner

Lowell A. Larson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 to 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/8/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 7, 8, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Downing.

Holders 21, 23 and lead forming dies 25, 27 are adjusted in response to measured parameters of the semiconductor device, as required by these claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downing in view of Ellis.

Figures 16 to 18 of Ellis disclose a cam-controlled forming die such as that required by Claim 2. Ellis advises that the leads are formed with zero clearance against the bottom die in such a manner. It would have been obvious to one ordinarily skilled in the art to provide cam-controlled dies in Downing, following the suggestion of Ellis, in order to accurately shape the component leads.

Ellis further discloses sloped blocks to adjust the height of die components, as required by Claims 3 and 6, and advises that precision dimensions are obtained. It would have been obvious to one skilled in the art to provide sloped blocks to adjust the height of the holders 23 and forming dies 27 of Downing, following the suggestion of Ellis, in order to form precise dimensions in the bent leads.

In addition, Ellis advises that, for components having leads on four sides, the component can be rotated 90° between operations, as required by Claim 11, in order to bend leads on all four sides. See column 13, lines 9 to 29. It would have been further obvious to rotate components having leads on all four sides by 90° in the forming of Downing, following the teaching of Ellis, in order to sequentially locate all of the leads in the dies. Whether the same or different die sets are employed for the sequential bends is considered to be merely an obvious exercise of mechanical design merely requiring duplication of parts in the Downing apparatus.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Downing in view of Manabe et al.

This claim requires an adjuster to change the bend angle of the lead ends. Manabe et al. shows such a device is well known for lead bending and advises that improved flatness of the lead ends is obtained. It would have been obvious to one skilled in the art to provide angle adjustment means for the lead ends in the bending of Downing, following the suggestion of Manabe et al., in order to increase the precision of the product.

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6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Downing in view of Ishii.

This claim requires rollers to guide the top dies for adjustment. Ishii discloses lead forming in which top die 18 is guided by rollers 20 for transverse displacement. It would have been obvious to one skilled in the art to provide rollers to support the transverse movement of top dies 25 in Downing, following the suggestion of Ishii, in order to reduce the internal friction in the die assembly.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tepper.

Tepper discloses a lead forming die assembly having adjustable components, and advises that the assembly is set up by measuring, tightening and checking. See column 4, lines 55 to 61. It would be an obvious expedient to one skilled in the art to perform the checking by comparing a processed component to a standard and making necessary adjustments accordingly, as required by this claim.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession

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of the claimed invention. No disclosure is found of top dies having sloped adjustment blocks, as recited in this claim.

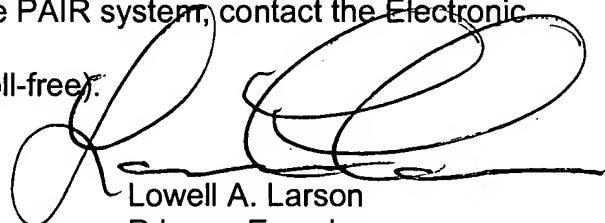
Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jones et al. further shows the state of the art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lowell A. Larson whose telephone number is (571) 272-4519. The examiner can normally be reached from M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Banks Derris can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Lowell A. Larson', written over a horizontal line.

Lowell A. Larson
Primary Examiner
Art Unit 3725

LAL
September 23, 2005